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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/026,737      | 12/27/2001  | Sammy J. Graham      | 8350.1653-00        | 1968             |

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EXAMINER

THOMPSON, ANNETTE M

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/026,737

Applicant(s)

GRAHAM ET AL.

Examiner

A. M. Thompson

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2001 - 09 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This application 10/026,737, with it accompanying Preliminary Amendment has been examined. Claims 1, 10, 12, and 21 are amended. Claims 1-22 are pending.

#### ***Claim Objections***

1. Claims are objected to for the following reasons: Pursuant to claim 1, at line 2 after "comprising", insert - -the steps of- - to provide antecedent basis for this phrase in claim 2. Pursuant to claim 2, after "connections," insert - -and- -. Pursuant to claims 5 and 6, at line 1, delete "accessing" and insert - -establishing- - in lieu thereof to provide proper antecedent basis; additionally, at line 2, delete "structure" and insert - -system- - in lieu thereof to provide proper antecedent basis. Pursuant to claim 6, at line 4, delete "and/or" and insert either - -and- - or - -or- - to provide claim definiteness. Pursuant to claim 8 and 17, "material" should be plural, i.e. *materials*. Pursuant to claim 21, at line 3, after "steps", delete the comma, and insert a colon in lieu thereof. Pursuant to claim 22, clarify this claim by indicating *where* or *to what* the plurality of components is to be connected. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Rejection of claims 1-22**

3. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ozaki, U.S. Pub. No. 2003/0050723. Ozaki discloses a wire harness design supporting method and program.

4. Pursuant to claim 1 which recites [a] method of designing a system including an element wherein the element connects a plurality of components (page 1, ¶ 0004; page 4, ¶ 0079), the method comprising establishing a system design including the plurality of components; generating a diagram associated with the system design (page 1, ¶¶ 0005, 0011; page 4, ¶ 0080), wherein the diagram includes the element and the plurality of components; establishing guidelines for designing the system (page 1, ¶ 0011); and automatically determining a routing pattern in the system for the element based on the diagram and the guidelines (page 2, ¶ 0017; page 4, ¶ 0079; page 5, ¶ 0088).

5. Pursuant to claim 2, wherein the element includes one or more connections (page 5, ¶ 0087), the step of determining a routing pattern includes the steps of determining one or more sets of one or more connections that can be bundles (page 5, ¶ 0090); and determining a routing pattern in the element for each bundle (page 5, ¶¶ 0089, 0090).

6. Pursuant to claim 3, further including the steps of receiving one or more revised guidelines for designating the structure and determining a revised routing pattern in the system for the element based on the diagram and the revised guidelines (page 1, ¶¶ 0010, 0011).

Art Unit: 2825

7. Pursuant to claim 4, further including providing a drawing illustration the structure and the determined routing patterns (page 4, ¶ 0079).

8. Pursuant to claim 5, wherein the step of accessing guidelines for designing the system includes the step of accessing guidelines associated with the system design (page 4, ¶¶ 0080, 0085).

9. Pursuant to claim 6, wherein the step of accessing guidelines for designing the system includes the step of accessing guidelines associated with the plurality of components and the elements (pages 4-5, (page 4, ¶¶ 0080, 0085)¶ 0085-0087).

10. Pursuant to claim 7, further including the step of automatically providing information about the designed system (page 3, ¶ 0033).

11. Pursuant to claim 8, wherein the step of automatically providing information includes the step of providing at least one of: a three dimensional drawing of the structure (page 4, ¶¶ 0079, 0085); a two dimensional drawing of the structure (page 5, ¶ 0093); a list of elements and components (page 5, ¶ 0090); and a bill of material associated with at least one of the system, the element, and the components.

12. Pursuant to claim 9, wherein the element includes a harness (page 1, ¶ 0010; page 4, ¶¶ 0078, 0079).

13. Pursuant to claim 10, which recites a computer-readable medium including instructions (page 4, ¶ 0085) for designing a structure for routing a plurality of elements for connecting components, comprising steps of establishing a system design including a plurality of components (page 4, ¶ 0079); generating a diagram associated with the system design (page 1, ¶¶ 0005, 0011; page 4, ¶ 0080), wherein the diagram includes

Art Unit: 2825

the plurality of elements and the plurality of components; accessing guidelines for designing the system (page 1, ¶ 0011, page 4, ¶¶ 0080, 0085); and automatically determining routing patterns in the structure for the plurality of elements based on the diagram and the guidelines (page 2, ¶ 0017; page 4, ¶ 0079; page 5, ¶ 0088).

14. Pursuant to claim 11, wherein the step of determining routing patterns includes the steps of determining one or more sets of one or more elements that can be bundles (page 5, ¶ 0090); and determining a routing pattern in the structure for each bundle (page 5, ¶¶ 0089, 0090).

15. Pursuant to claim 12, further including the steps of receiving one or more revised guidelines for designing the structure; and determining a revised routing pattern in the structure for the plurality of elements based on the diagram and the revised guidelines (page 1, ¶¶ 0010, 0011).

16. Pursuant to claim 13, further including providing a schematic illustrating the structure and the determined routing patterns (page 4, ¶ 0079).

17. Pursuant to claim 14, wherein the step of accessing guidelines includes the step of accessing standards associated with the system design (page 4, ¶¶ 0080, 0085).

18. Pursuant to claim 15, which includes the step of accessing standards associated with the plurality of elements (pages 4-5, (page 4, ¶¶ 0080, 0085)¶ 0085-0087).

19. Pursuant to claim 16, further including the step of automatically providing information about the designed structure (page 3, ¶ 0033).

20. Pursuant to claim 17, wherein the step of automatically providing information includes the step of providing at least one of: a three dimensional drawing of the

structure (page 4, ¶¶ 0079, 0085); a two dimensional drawing of the structure (page 5, ¶ 0093); a list of elements and components (page 5, ¶ 0090); and a bill of materials.

21. Pursuant to claim 18, wherein the structure includes a harness (page 1, ¶ 0010; page 4, ¶¶ 0078, 0079) and the elements includes wires (page 1, ¶ 0005; page 5, ¶ 0096).

22. Pursuant to claim 19, which recites a system (Fig. 1; page 4, ¶ 0078) for designing a system including an element, wherein the element connects a plurality of components (page 4, ¶ 0080), the system comprising a processor (page 4, ¶ 0079, 0081); and a memory (page 4, ¶ 0081), wherein the memory includes a computer-aided design module for establishing a system design and generating a diagram associated with the system design (page 4, ¶ 0078-81), wherein the diagram includes the element and the plurality of components; one or more guidelines for designing the system; and a routing design module for automatically determining routing patterns in the structure for the elements based on the diagram and the guidelines (page 4, ¶¶ 0082-87).

23. Pursuant to claim 20, wherein the routing design module is software designed to work with the computer-aided design module (¶¶ 0004, 0006, 0079, 0086).

24. Pursuant to claim 21, which recites a system for designing a system for including an element (¶¶ 0079, 0087) wherein the element connects a plurality of components, the system comprising a routing design module (inherent to the CAD design system of Ozaki, ¶¶ 0010, 0011, because the Ozaki system performs routing as part of the CAD system and this is therefore indicative of the existence of a routing module) configured to establish a system design including the plurality of components; generate a diagram

associated with the system design (page 1, ¶¶ 0005, 0011; page 4, ¶0080). . . establish guidelines for designing the system (page 1, ¶ 0011, page 4, ¶¶ 0080, 0085); and automatically determine a routing pattern in the system for the element based on the diagram and the guidelines (page 2, ¶ 0017; page 4, ¶ 0079; page 5, ¶ 0088).

25. Pursuant to claim 22, which recites a method of routing an element comprising establishing the plurality of components to be connected (page 1, ¶ 0004; page 4, ¶ 0079); establishing routing guidelines (page 1, ¶ 0011); automatically determining a routing of the element to connect the plurality of components based on the routing guidelines (page 2, ¶ 0017; page 4, ¶ 0079; page 5, ¶ 0088).

### ***Conclusion***

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please reference the PTO-892 for a complete listing.

27. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to A.M. Thompson whose telephone number is (703) 305-7441. The Examiner can usually be reached Monday thru Friday from 8:00 a.m. to 5:00 p.m.. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew S. Smith, can be reached on (703) 308-1323.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956 or the Customer Service Center whose telephone number is (703) 306-3329.

28. Responses to this action should be mailed to:

Commissioner for Patents  
P.O. Box 1450



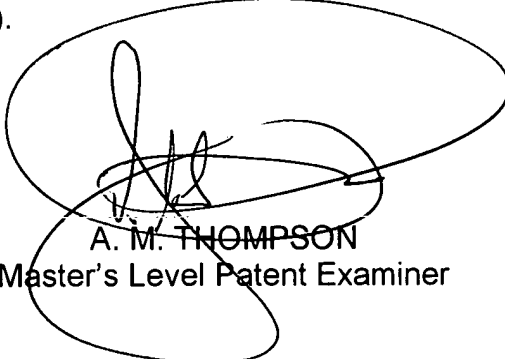
Application/Control Number: 10/026,737  
Art Unit: 2825

Page 8

Alexandria, VA 22313-1450  
or faxed to:

(703) 872-9306, (for all **OFFICIAL** communications intended for entry)

Hand-delivered responses should be brought to Crystal Plaza 4, 2021 South Clark  
Place, Arlington, VA., Fourth Floor (Receptionist).



A. M. THOMPSON  
Master's Level Patent Examiner

9 August 2003